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Journal Item

How to cite:

Weller, Martin (2015). MOOCs and the Silicon Valley Narrative. Journal of Interactive Media in Education, 2015(1) pp. 1–7.

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Version: Version of Record

Link(s) to article on publisher's website:

<http://dx.doi.org/doi:10.5334/jime.am>

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ARTICLE

MOOCs and The Silicon Valley Narrative

Martin Weller*

Massive open online courses (MOOCs) have generated considerable media interest, more than other education initiatives such as Open Education Resources (OERs). In this article the author argues that this can be seen as an example of the battle for narrative in open education. MOOCs attracted media interest because they appealed to broader narratives such as “education is broken” and the dominant Silicon Valley narrative. Analysis of the media coverage of MOOCs highlights how they satisfied the core beliefs inherent in these narratives in a way that other educational initiatives have not.

Keywords: MOOCs; open education; OERs

Introduction

No subject in educational technology in recent years has generated as much excitement amongst educational entrepreneurs and angst amongst established academics as MOOCs. It was MOOCs, and not other forms of open education such as OERs, open access or open scholarship that caused veteran e-learning expert Bates (2014) to despair, ‘I can’t express adequately just how pissed off I am about MOOCs – not the concept, but all the hubris and nonsense that’s been talked and written about them. At a personal level, it was as if 45 years of work was for nothing.’

Why should this be so? What is it about MOOCs that causes despair and excitement in equal measure? One part of the answer to this question is that unlike almost any other educational development, MOOCs have attracted considerable media interest. MOOCs can also be seen as a microcosm of the wider issues in open education, because it is with open courses that they are brought into sharpest relief.

This rapid growth of MOOCs can be demonstrated by comparing their internet interest with that of OERs. A simple use of Google Trends reveals how interest in MOOCs has grown, comparative to OERs (see **Figure 1**).

While OERs have had steady growth since 2009, indicating an increased awareness, MOOCs arrive seemingly from nowhere in late 2012 and rapidly overtake OERs.

In order to get a feel for the media interest and stance on MOOCs, here is a sample of headlines from 2012 and 2013:

- The MOOC Revolution: How To Earn An Elite MBA For Free (Schmitt 2013)
- Revolution Hits the Universities (Friedman 2013)
- Will MOOCs Massively Disrupt Higher Education? (Booker 2013)

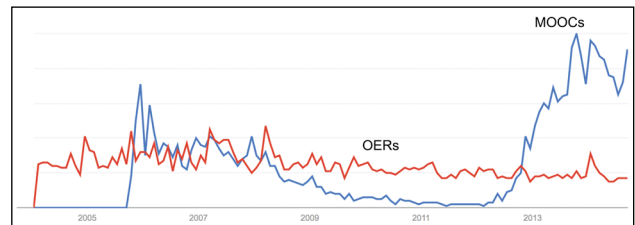


Figure 1: Google Trends plot of relative interest in MOOCs and OERs.

- How Coursera, a free online education service, will school us all (Kamenetz 2012)
- What MOOCs Will Really Kill Is The Research University (Worstell 2013)
- Embrace Moocs or face decline, warns v-c (Parr 2013)
- MOOCs: End of higher ed as we know it? (Blackenhorn 2012)
- Higher-ed courses with massive enrollments: A revolution starts (Idea 2012)

Writing in 2014 these headlines already seem dated. If one substitutes OERs for MOOCs in any of these articles one might make the same claims but, it becomes apparent that such hyperbolic pieces would not be written about OERs. Often the articles were little more than publicity pieces for the MOOC companies involved, with no critical evaluation of the projected claims. From the open education perspective the question is why would one branch of open education attract so much excitement, while another one does not?

Education is broken

The reason that MOOCs attracted so much attention, and so little critical evaluation, is not necessarily a result of their inherent interest, but because they slotted neatly into a broader set of narratives, in a way that other forms of open education haven't. There are two

* The Open University, United Kingdom
m.j.weller@open.ac.uk

aspects to this broader narrative, the first is the framing of the problem as 'education is broken', and the second is the overriding Silicon Valley narrative that shapes the form of solutions.

Education is broken has become such an accepted stand-point that it is often stated as an irrefutable fact. Andrew D'Souza, the chief operating officer of an educational technology start-up states that 'The education space is massive, very broken' (Tauber 2013); Sebastian Thrun of MOOC company Udacity declared that 'Education is broken. Face it. It is so broken at so many ends, it requires a little bit of Silicon Valley magic' (Wolfson 2013); an influential report from the Institute for Public Policy Research entitled 'An Avalanche is Coming' claimed that 'The models of higher education that marched triumphantly across the globe in the second half of the 20th century are broken' (Barber, Donnelly, & Rizv 2013); even insightful analysts such as Shirky are prone to it, with a piece entitled *Your Massively Open Offline College Is Broken* (Shirky 2013).

Before considering a response to the broken education claim, there are two questions to ask. The first is, what is meant by a broken system? The second is why is it stated with such conviction and so often?

To address the first question, of what is meant by the phrase, we see that what, or how, education is broken is rarely expanded upon. It is simply stated as a starting position, from which all else follows, a *sine qua non* of educational revolution. Let us assume that this is a genuinely held belief of those who propose it. It is sensible to ask then in what ways might education be broken? At different times it can relate to lack of creativity in K12 education, or truancy rates, or more often, the financial model of higher education, usually all from a US perspective.

It may well be that there is insufficient creativity in K12 education, but some of this is a result of scale. Any alternative would need to operate at the scale of a nationwide system and encompass all types of learner. One often sees claims that schooling has remained unchanged for hundreds of years, or that it is a system designed for the industrial age, for instance Sal Khan (founder of the popular e-learning resource site the Khan Academy) in an interview with *Forbes* claims that education became static over the past 120 years (Khan and Noer 2011). Such claims vastly underestimate the change in pedagogy to more project and group based work that has occurred in schools. As Watters (2012) highlights 'To jump from 1892 to 2000 – from the 'Committee of Ten' to Khan Academy – ignores the work done by numerous educators and technologists to think about how computers and networks will reshape how we teach and learn'. There are undoubtedly ample opportunities to change how subjects are taught, to engage children and particularly to take advantages of new technology, and one should not underestimate the obstacles in achieving any of this, but it hardly justifies the label of broken.

A point of evidence sometimes claimed for the broken education argument is that truancy is at an all time high (eg Paul 2013), therefore schooling isn't working, and thus a radical solution is required. However the manner in which truancy rates are recorded varies considerably,

and any unauthorised absence is now counted as truancy, for example a child going on holiday with parents. So before using truancy as evidence that education is fundamentally broken, it is necessary to ask questions such as: Is any change now a statistical one, or within the realms of normal variation? Are historical comparisons valid (i.e. are they comparing the same measures)? Can an increase in truancy rates be accounted for by an increase in population or targeted school attendance (eg if you are working harder to make sure certain groups are registered in school in the first place, will you get more truancy)? Is it an increase in more pupils being truant, or the same number of truancy pupils being truant for longer? (e.g. one study found that 7% of pupils account for one third of all truancy numbers, Metro 2008).

Which is not to suggest that truancy isn't a serious issue, but it is an example of where making sweeping statements about an entire school system may miss targeting the actual problem groups, which could be more effective. It is also worth noting that truancy, or problems at school are often the result of wider societal problems, such as drugs, gun crime, poverty, family breakdown, etc. Isolating school in this mix would seem to place an unreasonable expectation on it.

Which brings us to funding, which is the most common candidate for stating that education is broken - that it is financially unsustainable. Spending on education has been increasing, while the return graduates receive in terms of increased salary has been diminishing. In short, higher education is no longer a good return on investment from a purely monetary perspective. Of course, this argument only applies where student fees are paid by the student (such as in the US and UK), other countries, such as Germany, provide free access to higher education. The blame for these rising costs is usually placed at the doors of universities, but in essence they are simply responding to market demands. If students (or their parents) want better facilities such as gyms, cafes and residencies then in order to compete they have to provide these. In proposing MOOCs as the solution to these funding problems most commentators fail to appreciate the demands that would be placed on MOOCs if they moved from a secondary, supplementary position in education to a central, primary one.

For instance, when Shirky (2012) promotes MOOCs as the equivalent of MP3 or YouTube, he underestimates the demands that will be put on them. MP3s could replace vinyl/CDs completely, while free MOOCs can't replace the higher education system because much of the cost of education has little to do with the educating element of the overall mix. Taking a MOOC for interest is one thing, but when career prospects depend on it, then different demands will be placed on MOOCs that currently don't exist. If MOOCs replace higher education then they would need to find ways of realising the following:

- Dealing with student appeals
- Coping with a diverse range of students and abilities
- Ensuring quality control of content
- Developing assessment methods and procedures that can be defended

- Ensuring robustness of service
- Ensuring accreditation reliability and trustworthiness
- Complying with numerous regulations on issues such as accessibility
- Ensuring a supply of high quality course production
- Providing pastoral care

And so on, all of these requirements have financial implications beyond the current content production focus (which is currently subsidised by the very universities that MOOCs are supposed to replace). Inevitably MOOCs as universal education method would soon begin to cost more and more. They may be cheaper than the existing model, which would represent a significant change to higher education, but they would soon cease to be free or open.

It is not the focus of this article to explore various funding models for higher education, but the education is broken argument is rarely stated more explicitly as 'funding for education is broken', and if the debate that society needs to have is about how to fund higher education, then that should be the focus rather than a proxy argument around broken education and alternative models.

One objection to the education is broken argument then is that it is too simplistic and just lazy, as with the truancy case, there are a number of factors that would need exploring for an effective solution. But there is also a more manipulative intention to it, which relates to the language of change and how it shapes our responses. If something is diagnosed as broken, then the appropriate response is to fix it. The search then becomes for a solution, and very often those people who are determining education to be broken, also stand to profit from providing an alternative solution. For instance the authors of the 'Avalanche' report in the UK (Barber, Donnelly, & Rizv *ibid*) all work for the education publisher and courseware provider Pearson. From the quotes above both D'Souza and Thrun were CEOs of companies that seek to offer a solution to the problem of broken education. There is even an education start-up (degreed.com) who ran a campaign with the slogan 'Education is broken. Someone should do something.' That someone being them, naturally.

Caulfield (2013) highlights the difference between a rhetoric of opportunity and a rhetoric of crisis. This difference in language is significant for framing our response. Thibodeau & Boroditsky (2011) found that the metaphors used to frame a problem influenced the solution that subjects proposed, so whether crime was couched in terms of a virus or a beast like metaphor, would shape how people thought it should be handled. A rhetoric of opportunity might suggest encouraging those already working in the sector to take advantage of opportunities and work with others. A rhetoric of crisis suggests that the incumbents cannot be trusted, and that external agents are required to make sweeping changes.

Education is broken, it therefore requires fixing, and MOOCs provide the radical solution required. This was the simplistic logic that underpinned many of the early MOOC articles. It is easy to see how MOOCs can be posited as a solution to the nebulous problem of broken education

– they are free, online, and infinitely scalable. The same could be said of OERs also, so why do MOOCs appeal to this rhetoric of crisis in a way that other open education movements have not? The reasons relate to the second dominant narrative that they have sympathy with, namely that of Silicon Valley.

The Silicon Valley narrative

The model of Silicon Valley provides such a powerful narrative that it has come to dominate thinking far beyond that of computing. For instance Staton (2014) declares that the degree is doomed because Silicon Valley avoids hiring people with computer science degrees, and prefers those with good community presence on software developer sites. From this he concludes this model is applicable across all domains and vocations. It hardly needs adding that Staton is the CEO of an educational company.

There are several necessary elements to the Silicon Valley narrative: firstly that a technological fix is both possible and in existence; secondly that external forces will change, or disrupt, an existing sector; thirdly that wholesale revolution is required; lastly that the solution is provided by commerce.

We have seen how the education is broken meme satisfies the third condition of the Silicon Valley narrative. If it is accepted as broken, then only a revolution is sufficient to resolve it. MOOCs appeal to the first and second of these conditions. They are a very technologically driven solution, particularly in their xMOOC instantiation. Thrun famously worked at Google where he developed the driverless car. The artificial intelligence promise of adaptive learning systems and sophisticated automatic assessment is both appealing in that it seems futuristic and aligns with the basic premise of Silicon Valley technological solutionism.

Although MOOC pioneers such as Thrun (founder of Udacity), Koller and Ng (founders of Coursera) all worked at Stanford, and so could thus be seen as part of the establishment, Thrun in particular has been cast as the education outsider. In order to satisfy this need for an external party coming to the aid of the sector, the Khan Academy's founder Sal Khan has often been proposed as the godfather of MOOCs (High 2013), while often ignoring the input of MOOC pioneers such as Downes, Siemens and Wiley.

Another important aspect that appeals to Silicon Valley, entrepreneurs and journalists alike is that of disruption. This comes from Christensen's influential 1997 work, *The Innovator's Dilemma*, which analysed how digital technology in particular could create new markets which disrupted existing ones. Christensen made the distinction between sustaining technologies, which help improve an existing market, and disruptive ones, which establish a new market. Digital cameras can be seen as disruptive to the traditional camera market, while improved memory and features of digital cameras are sustaining.

It is a term that has been applied much more broadly than its original concept, to the point where it is almost meaningless, and rarely critically evaluated. Dvorak (2004) complains that it is essentially meaningless, stating that 'There is no such thing as a disruptive technology. There

are inventions and new ideas, many of which fail while others succeed. That's it.' There remains however a disruption obsession inherent in the Silicon Valley narrative. As Watters (2013) argues, disruption has become somewhat akin to a cultural myth amongst Silicon Valley:

when I say then, that "disruptive innovation" is one of the great myths of the contemporary business world, particularly of the tech industry, I don't mean by "myth" that Clayton Christensen's explanation of changes to markets and business models and technologies is a falsehood... my assigning "myth" to "disruptive innovation" is meant to highlight the ways in which this narrative has been widely accepted as unassailably true.

Nobody wants to just create a useful tool, it has to disrupt an industry. Education, perceived as slow, resistant to change and old-fashioned is seen as ripe for disruption. Christensen, Horn and Johnson (2008) themselves have deemed it so, stating that 'disruption is a necessary and overdue chapter in our public schools.' Hence the *Avalanche* report justifies itself by claiming that all of the key 'elements of the traditional university are threatened by the coming avalanche. In Clayton Christensen's terms, universities are ripe for disruption.' In his criticism of the impact of OERs, Kortemeyer (2013) states that 'OERs have not noticeably disrupted the traditional business model of higher education', because for something to be successful, only disruption counts.

We can see many of these elements in essays on MOOCs. Let us take Shirky's essay 'Your Massively Open Offline College Is Broken' (2013), as it generated a lot of interest and was considered to be a thoughtful analysis. In terms of our narrative essentials, Shirky even has the 'education is broken' meme in the title of his piece, and later states it boldly: 'I have a different answer: School is broken and everyone knows it.' He sets out a reasonably convincing case about the finance issues associated with higher education, although he does not question finance models. Shirky cites a book 'Don't go back to school' (Stark 2013) which interviewed 100 people who had dropped out of school and gone on to be successful. Largely they then self-teach themselves using internet resources, an example of the Silicon Valley model being applied broadly.

In his previous essay, 'Napster, Udacity and the Academy' (Shirky 2012) he compares the impact of MOOCs on higher education with that of the MP3 on the music industry. This conforms to the Silicon Valley narrative, proposing a revolution and disruption: 'Higher education is now being disrupted; our MP3 is the massive open online course (or MOOC)'. It also suggests that the commercial, external provider will be the force of change, stating that 'our Napster is Udacity, the education startup'.

All of the elements can also be seen in Clark's (2013) piece where he declares that (referring to Khan) 'It took a hedge fund manager to shake up education because he didn't have any HE baggage.' It appeals to the Silicon Valley narrative to have a saviour riding in from outside

higher education to save it. If the influence of those inside higher education such as Wiley, Downes, Siemens, etc is acknowledged then that weakens the appeal of the story.

Kernohan (2013) performed a semantic analysis of eleven popular MOOC articles. Taking Kernohan's articles to conduct simple word counts the word 'disrupt' (or derivative) occurred 12 times, 'revolution' 16, and 'company' 17. Obviously this is a selective choice of terms ('open' appears 48 times for comparison), but the presence of these terms indicates a particular framing of the MOOC story that allies with the Silicon Valley narrative.

We can now see why MOOCs proved so popular with journalists. Firstly they seem to offer a solution to the education is broken meme, which had been gaining currency. Secondly, they met all the criteria for the Silicon Valley narrative: they proposed a technological solution, they could be framed as the result of external forces, and they provided a revolutionary model. Nearly all the early MOOC articles framed them as disruptive to the standard higher education model. And they were established as separate companies outside of higher education, thus providing interest around business models and potential profits by disrupting the sector. This heady mix proved too irresistible for many technology or education journalists.

This analysis also reveals why other open education initiatives haven't garnered as much attention. They often seek to supplement or complement education, thus ruining the education is broken argument. Similarly, they are often conducted by those who work in higher education, which undermines the narrative of external agents promoting change on a sector that is out of touch. And lastly, they are supported by not-for-profit institutions, which does not fit the model of new, disruptive businesses emerging. If one wanted to make an argument for disruption, then open textbooks could make a convincing case, since they undermine an established business with digital, low-cost alternatives, but as projects like OpenStax are not-for-profit, they do not fit the Silicon Valley narrative as neatly as MOOCs.

One further aspect of the Silicon Valley and disruption narrative is that it demands a 'year zero' mentality. It is a much more convincing story if someone can be said to have invented a new way of working. Because complete genesis invention is rare, most work is tinkering with old ideas and improving them, this often requires either a wilful ignorance of past work, and an imaginative reworking of it.

Back to the Future, again

2013 saw a number of MOOC related discoveries and breakthroughs, which bore at least a passing resemblance to established educational practice. For example we saw the BBC (Coughlan 2013) announcing Harvard's innovative trialling of the 'SPOC – a small, private online course' that would take the advantages of MOOCs, but place them in a safer, enclosed environment for fee-paying campus students. It took quite some imagining to see how this varied from the online courses that most universities had been running for the past decade, but rebranding

it under the MOOC umbrella rendered it new. Coursera similarly decided that campus based e-learning might be an effective market for MOOCs, when they partnered with ten universities (Coursera 2013). As well as SPOCs we had Micro-MOOCs, which were 'short e-courses', DDOCs (Distributed Open Collaborative Course) and SOOCs (Social Online Open Course or Small Open Online Course).

Clayton Christensen seemed to come to the conclusion that totally online learning in K12 was not imminent, or that it might not be desirable, and a blended learning approach, which many schools had practiced for years, could be beneficial. Rather than view this as a sustaining technology, or a failure of disruption, it was labelled 'hybrid pedagogy' and touted as 'a fundamentally new concept [in] the world of disruptive innovation' (Christensen, Horn and Staker 2013).

EdX declared that it was hard and expensive to create quality online courses, (Kolowich 2013a) and Thrun decided to focus Udacity in corporate e-learning, largely on finding that retaining open entry learners is difficult (Chafkin 2013). In the Khan interview mentioned above, most pedagogic theories developed over the past 120 years are ignored, and then attributed to Khan.

Petroski (2012) suggests that society forgets fundamental lessons in bridge design every 30 years, because that is the average length of an engineering career. The same may be true with educational technology, except that it is a form of wilful amnesia. Educators have been designing large scale distance courses, and then large scale online courses for over 40 years, and yet much of the MOOC movement has chosen to ignore this experience.

Some of the rebranding around MOOCs is an inevitable, and beneficial, side effect of the increased interest in e-learning that they generated. Labelling an online course a SPOC may seem strange, but it is not harmful. There is however a more suspicious element in some of the amnesia, which relates to the Silicon Valley narrative. It inflates the value of the innovation if it can lay claim to inventing a wholly new approach, and it also undermines the status of incumbents in an industry if their contribution is dismissed or forgotten, rendering the role of external agents more viable.

This is not to suggest some higher level conspiracy generating from Silicon Valley, but the essential ingredients of the Silicon Valley narrative constitute what might be viewed as a conspiracy of sentiment. It appeals to a world view that entrepreneurs, investors, journalists and technologists implicitly hold and reinforce. As Watters (2012) puts it 'the version of history they offer is quite telling, as it reflects how they perceive the past, how they want the rest of us to perceive the past, as well as how they hope we'll move into the future.'

Conclusions

All of this might not matter, most disciplines will complain that their coverage in the general media is overly simplistic or biased – one has only to think of the coverage of health issues for instance. Indeed it could be seen as a blessing, any media coverage helps to make future

funding more likely and makes internal projects more viable.

Nor is this simply a matter of historical pedantry, a desire to ensure that early MOOC pioneers are assured their rightful place in history. While historical accuracy is always desirable, it does not impact on how people use the legacy of that discovery once a victor has been determined. However, there is more at stake than simple journalistic accuracy. There is a battle for narrative in open education, and that narrative will have a strong influence on the future direction it takes. If MOOCs are the most prominent aspect of open education, then the narrative associated with them will create an impact for other aspects. If the dominant narrative is that of Silicon Valley then this frames what is deemed the appropriate model for other forms of open education. If you wish to create an open course then the model for doing so, and criteria for deciding what it should achieve, has been determined to serve the needs of this overriding *weltanschauung*. Or if you wanted to structure a programme for releasing low-cost staff outputs, you could find yourself being asked to couch it in terms of MOOCs.

All of this is not to suggest that the MOOC phenomena haven't been important both in terms of the education sector itself, and more significantly, for learners. As Siemens (2012) stated 'anyone who goes out and educates, or at least provides a learning opportunity for people in developing parts of the world and does so without cost and increases their prospect for opportunities, in my eyes is a terrific idea'. It would seem churlish to complain about the tone of press coverage when set against the thousands of learners who have had positive, even life changing experiences in MOOCs.

One of the negative implications of education is broken/Silicon Valley narrative is that it necessarily frames all change as revolution. This creates a false dichotomy amongst the audience, who either accept the revolution and all that it encompasses, or they are seen as opposing it, and wishing to preserve the status quo. For example, to be suspicious of the motives of those who declare education to be broken, or to question the nature of this claim, is not the same as proclaiming that there are no problems in education. Similarly, being dismissive of the concept of disruption is not equivalent to being resistant to change.

Another downside to the revolution based narrative is that it requires excessive claims to be made in order to justify the scale of the revolution. For example Thrun declaring that there will be only 10 providers of global education (Leckart 2012), or that MOOCs will mean the end of the university (Simm 2012) and provide free global education for all (Koller 2012). Inevitably, these predictions are failing – Thrun has changed direction with Udacity, EdX found that linking employers with MOOC learners was not successful and that 'existing HR departments want to go for traditional degree programs and filter out non-traditional candidates' (Kolowich 2013a) and a school designed to provide community while students studied MOOCs of their choice has struggled to retain students (Caplan-Bricker 2013). The MOOC backlash has

begun, with some university staff refusing to use MOOC material or participate in MOOCs (Kolowich 2013b) and much online comment now taking on a critical tone, for example, Laurillard's (2014) Five Myths About MOOCs. It is debatable whether these types of reaction would be seen if MOOCs had not been oversold, and there is a danger that the backlash will undermine future MOOC development.

Openness in education offers many real opportunities to improve education, in terms of the opportunities for learners, developing pedagogies based on open practice, distributing free resources and democratising education. Many of these radical changes are being driven by those who work in education, but the Silicon Valley narrative wishes to exclude this part of the story. MOOCs have highlighted how the battle for narrative shapes the direction that an innovation can take. It may be MOOCs currently, but the same pattern is likely to occur with whatever the next open education innovation might be, because there is a powerful story to be told around global education, and the size of the education market is irresistible to the Silicon Valley narrative. Recognising this struggle for narrative and constructing alternatives is essential in influencing the direction of open education.

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How to cite this article: Weller, M 2015 MOOCs and The Silicon Valley Narrative. *Journal of Interactive Media in Education*, 2015(1): 5, pp.1-7, DOI: <http://dx.doi.org/10.5334/jime.am>

Published: 10 April 2015

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